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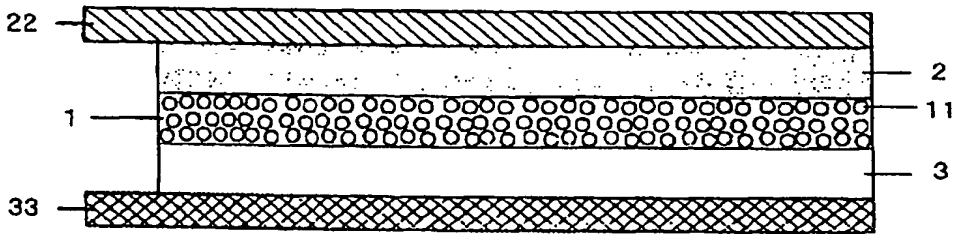

(57) Abstract

The present invention relates to a solid electrolyte having conductivity to lithium ion by providing spaces for liquid component and lithium salts to be absorbed by way of introducing an absorbent to the inside of an electrolyte film, a process for preparing the same and a rechargeable lithium cell using the same. As the absorbent, polymers or inorganic materials having not more than 40 μm of particle size can be used. As the polymer binder, any binder of which solubility against the liquid eletrolyte is small can be used. The solid electrolyte according to the present invention has the ionic conductivity of more than approximately 10^{-4} S/cm at room temperature. The cell is fabricated from the solid electrolyte together with electrodes by lamination or pressing methods. And, the liquid electrolyte, which is decomposed by moisture, is introduced to a cell just before packaging. Therefore, the solid electrolyte according to the present invention is not affected by the humidity and temperature conditions during the manufacturing of the electrolyte film. In addition, the solid electrolyte according to the present invention has high mechanical strength and little reactivity to lithium metal, and thus is suitable as an electrolyte for rechargeable lithium cells.

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